

DENSE SRAM CELLS WITH SELECTIVE SOI

ABSTRACT OF THE DISCLOSURE

A SRAM cell fabricated in SSOI (selective silicon on insulator) comprises cross coupled PFET pull-up devices P1, P2 and NFET pull-down devices N1, N2, with the P1, P2 devices being connected to the power supply and the N1, N2 devices being connected to the ground. A first passgate NL is coupled between a first bitline and the junction of the devices P1 and N1, with its gate coupled to a wordline, and a second passgate NR is coupled between a second bitline and the junction of devices P2 and N2, with its gate coupled to the wordline. Each of the pull-up devices P1, P2, the pull-down devices N1, N2, and the first and second passgates NL, NR are fabricated with selective SOI, with buried oxide being selectively provided under the drains of the pull-up devices P1 and P2, the drains of the pull-down devices N1 and N2, and the sources and drains of the passgate devices NL and NR.